Fair Isaac Corporation Response to the Presidential Task Force on Identity Theft

In response to the Federal Identity Theft Task Force request for comments, Fair Isaac Corporation would like to comment on the issue of deterring identity theft by aggressively prosecuting and punishing those who commit the crime.

Fair Isaac Corporation supports the concept that the investigation and prosecution of identity theft criminals is vital in the fight to reduce identity theft; and that a National Identity Theft Law Enforcement Center could be used as a tool for participating law enforcement agencies to investigate and prosecute identity theft.   Such a center could be a critical component in the battle against this crime by enabling law enforcement to quickly analyze, share and coordinate information that is now dispersed throughout the financial system. Such a center could also make it possible for various law enforcement agencies to coordinate actions and verify complaints and evidence. Such a center would also make it possible to produce definitive and complete statistics on the impact of this crime.

Fair Isaac also supports the concept that information on identity fraud from financial institutions should be incorporated into a national center.   It is important for law enforcement to have access to commercial fraud information which has exceeded by several times the amount of information submitted to federal compliant databases. It is also important to incorporate commercial fraud information into any analysis of identity theft in order to obtain a complete picture of what has occurred and when it has occurred.

Every month, tens of thousands of identity theft complaints are made in the United States. Yet, most are never typically investigated because investigators of identity theft simply do not have complete and actionable information. Even though Identity theft fraud leaves useful, even rich, trails of information behind, that information is usually spread across multiple financial institutions and accounts so that it is rarely assembled into an actionable whole. Even consumer

complaints are dispersed: registered in a number of federal and state databases that today unfortunately are not shared. In addition, seldom if ever is this information collected and analyzed in a timely fashion: typically weeks or months pass before information about a crime is collected and yet criminals are able to make multiple fraudulent uses of an identity in minutes.

Figure: A concept of a National Identity Theft Law Enforcement Center that could incorporate fraud information from public and commercial sources and use best of breed analytics to discover patterns.
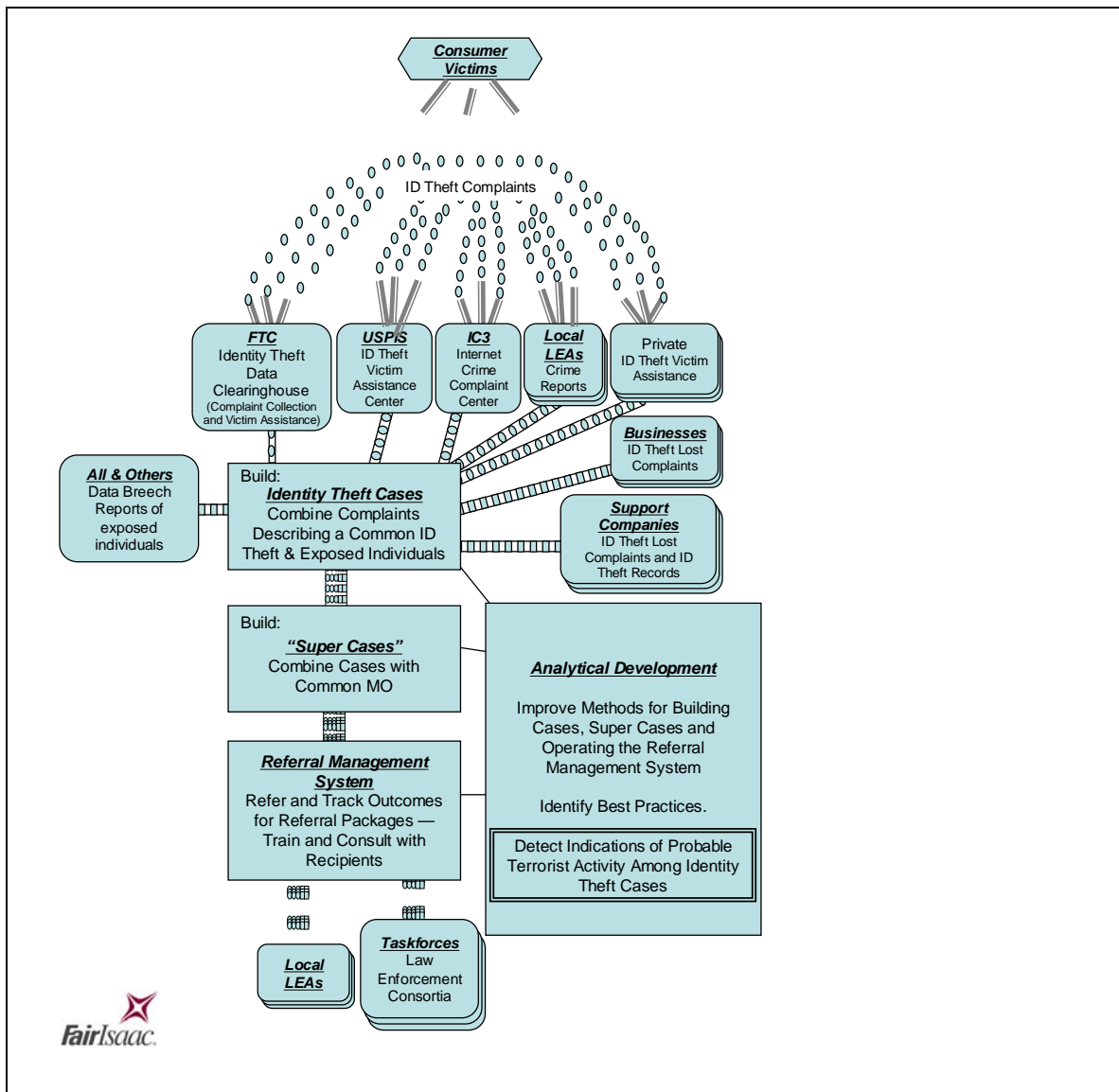
It is Fair Isaac's recommendation that a National Identity Theft Law Enforcement Center would provide and operate the advanced analytical tools (such as text

and semantic analysis, entity disambiguation, classifying neural network technology) law enforcement needs to stay ahead of systems-savvy criminals. A partnership of federal law enforcement, and business, the Center would serve law enforcement agencies at all levels and in all jurisdictions protecting consumers nationwide. Once operational, the National Identity Theft Law Enforcement Center could be able to provide a multitude of windows on the activities of many forms of criminal behavior.

A National Identity Theft Law Enforcement Center would be expected to convert millions of scattered complaints and reports from consumers, financial institutions, merchants, employers and law enforcement agencies into hundreds of richly detailed referral/evidential packages, each describing multiple frauds perpetrated by a single group or individual and illuminating that ring's methods and practices. Fraud complaints would be consolidated by the identity stolen. Then, these consolidated complaints will be further grouped by the details of how, when and where the fraud was performed. With such actionable information law enforcement agencies would have both the financial justification to allocate necessary resources and the factual basis for solid investigation results.

In order to perform this analysis, Fair Isaac recommends using advanced knowledge discovery, information extraction and network link analysis tools, to organize the data from various sources and of various types that the National Center would acquire in order to

- combine complaints about the same identity theft (Subject-association)
- combine identity theft records into referral packages law enforcement can use for investigations (Method of Operation or MO-association)

These advanced computational knowledge discovery tools would include:

- Information Extraction
  - Text methods
    - Semantic relation extraction
    - Feature extraction

- Named entity recognition and disambiguation
- Identity matching
  - Ontological features
- Relationship Analysis
  - Multidimensional Link Analysis (subspace methods)
  - Rule extraction
  - Concept Lattices (Formal Concept Analysis)
- Classification and Clustering
  - Classifying Neural networks
  - Support Vector Machines (and other machine learning methods)
  - Unsupervised learning methods
- Information integration
  - Bayesian networks

Through its work in the financial sector, Fair Isaac Corporation is aware that advanced mathematics greatly assist in finding and deterring fraud.

Using these advanced computational tools, a National Identity Theft Law Enforcement Center could make it possible to reconstruct data from various commercial and public sector sources, joining clues from multiple complaints and multiple crimes to point the finger at the criminal organizations behind the worst cases of identity theft. Only a center with national scope, using the best of information technology, can provide the advanced analysis needed to expose identity thieves and the criminal organizations behind them. Only a national center could distribute actionable information to the appropriate law enforcement agencies. A tool like a national center could help to provide the deterrence needed to limit this crime and the potential impact it can have on the economy of this country.

Investigation and prosecution of identity theft criminals is critically important in the fight to reduce identity theft:

- A substantial portion of identity theft is conducted by relatively few organizations with experience and proven methods of conducting fraud. Disabling such organizations through criminal sanctions can help to eliminate a significant part of nationwide identity theft, especially the most sophisticated schemes that are difficult to prevent in other ways.

- When industry applies new security measures blocking a particular form of identity theft, fraud organizations quickly adapt and develop new methods. This adaptation process relies upon many criminals trying many new methods to overcome security measures; most fail, but when one of the many succeeds, the word usually travels rapidly. The end result is an efficient and rapid adaptation capability for organized fraud operations. Such adaptation can be slowed significantly by making it more risky to try many new methods of fraud. If the chance of arrest and punishment increases even slightly, the willingness of fraud operatives to try one illegal scheme after another could diminish and adaptation could slow, thus multiplying the value of other new security measures. A tool like the National Identity Theft Law Enforcement Center could assist in increasing the chance of arrest and reducing fraud by both taking frauds themselves out of operation and slowing the adaptation of fraud operations to new security steps.

- By making investigation more common and frequent, a National Identity Theft Law Enforcement Center could make fraud a less attractive occupation and reduce its prevalence.

As an added benefit, a National Identity Theft Law Enforcement Center would help to facilitate cooperation between Law Enforcement and Business. Despite long-standing efforts by businesses and law enforcement agencies, cooperation between them has been limited and largely focused on special cases. In part, this has been the result of the scattered information phenomenon described above; in part because of technological and methodological differences between business and law enforcement; and, for many other reasons. A national center would not

remove all barriers to effective and expanded cooperation, but it would substantially improve matters by putting business and law enforcement organizations on a common technological and methodological basis. Most losses from most identity theft in the US are borne by financial services, businesses and merchants. And most of those losses are borne by large businesses. In large businesses dealing with consumers, the emphasis is on design and management of volume processes that minimize human involvement. Great effort is expended seeking the ideal process — a routine that properly handles all exceptions, including misbehavior and crime with automated efficiency. However, law enforcement is not connected to these processes. A national center would help to improve this connection by making referral of criminal complaints from businesses to law enforcement a routine process well meshed with existing business systems and, at the same time, convert masses of routine cases into actionable packages suitable and worthwhile for criminal investigation. With the National Identity Theft Law Enforcement Center, businesses can become part of the law enforcement solution to Identity Theft and law enforcement can become a valuable part of the business process.

Therefore, Fair Isaac Corporation strongly recommends that the Task Force proceeds with a National Identity Theft Law Enforcement Center. Fair Isaac would recommend that federal law enforcement initiate and staff the center using analytic tools developed and proven in the financial industry. Fair Isaac suggests that federal law enforcement work with industry to obtain information about frauds that have been confirmed for regular inclusion in the center. Also, Fair Isaac suggests finding a neutral location for the center operations that would facilitate the acceptance and use of the center by all law enforcement agencies federal, regional and local.

Fair Isaac is willing to participate in the development of such a center and in the development of the analytics for such a center.